

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/DK 03/00490

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C12N15/10 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, CAB Data, SEQUENCE SEARCH, BIOSIS, EPO-Internal, EMBASE, MEDLINE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02 38757 A (LEE KO WOON ; LEE SI HYOUNG (KR); AMICOGEN INC (KR); JUNG KYUNG HWA) 16 May 2002 (2002-05-16)	1-6,8, 12-21, 26,27, 47-52, 57,58,61
Y	claims 1-17; figures 1-11 ---	59,60
X	WO 98 42832 A (SHAO ZHIXIN ; ZHAO HUIMIN (CN); AFFHOLTER JOSEPH A (US); ARNOLD FRA) 1 October 1998 (1998-10-01)  claims 1-34; figure 3 ---	1-6,8, 12-21, 26,27, 47-52, 57,58,61

-/--

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"8" document member of the same patent family

Date of the actual completion of the international search

12 November 2003

Date of mailing of the international search report

27/11/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Hornig, H

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/DK 03/00490

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 01581 A (SHORT JAY M ;RECOMBINANT BIOCATALYSIS INC (US)) 15 January 1998 (1998-01-15)  claims 1-8; figures 1-6 ---	1-6,8, 12-21, 26,27, 47-52, 57,58,61
X	NEGRONI MATTEO ET AL: "Recombination during reverse transcription: An evaluation of the role of the nucleocapsid protein." JOURNAL OF MOLECULAR BIOLOGY, vol. 286, no. 1, 12 February 1999 (1999-02-12), pages 15-31, XP002226733 ISSN: 0022-2836	1,7,9, 12-27, 42, 45-52,61
Y	the whole document ---	59,60
X	NEGRONI MATTEO ET AL: "Copy-choice recombination by reverse transcriptases: Reshuffling of genetic markers mediated by RNA chaperones." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 97, no. 12, 6 June 2000 (2000-06-06), pages 6385-6390, XP002226735 June 6, 2000 ISSN: 0027-8424 cited in the application the whole document ---	1-6,8, 12-27, 45-52,61
X	MOUMEN ABDELADIM ET AL: "The HIV-1 repeated sequence R as a robust hot-spot for copy-choice recombination." NUCLEIC ACIDS RESEARCH, vol. 29, no. 18, 15 September 2001 (2001-09-15), pages 3814-3821, XP002226734 ISSN: 0305-1048 the whole document ---	1-6,8, 12-21, 26,27, 47-52
X	NEGRONI MATTEO ET AL: "Homologous recombination promoted by reverse transcriptase during copying of two distinct RNA templates." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 92, no. 15, 1995, pages 6971-6975, XP002226736 1995 ISSN: 0027-8424 the whole document ---	1-6,8, 12-21, 26,27, 47-52
	---	
	-/--	

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/DK 03/00490

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>PELISKA JAMES A ET AL: "Fidelity of in vitro DNA strand transfer reactions catalyzed by HIV-1 reverse transcriptase." BIOCHEMISTRY, vol. 33, no. 13, 1994, pages 3890-3895, XP002226737 ISSN: 0006-2960 cited in the application the whole document</p>	1-6,8, 12-21, 26,27, 47-52
X	<p>PELISKA JAMES A ET AL: "Mechanism of DNA strand transfer reactions catalyzed by HIV-1 reverse transcriptase." SCIENCE (WASHINGTON D C), vol. 258, no. 5085, 1992, pages 1112-1118, XP002226738 ISSN: 0036-8075 cited in the application the whole document</p>	1-6,8, 12-21, 26,27, 47-52
A	<p>GISH G ET AL: "DNA AND RNA SEQUENCE DETERMINATION BASED ON PHOSPHOROTHIOATE CHEMISTRY" SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, US, vol. 240, 1988, pages 1520-1522, XP002088489 ISSN: 0036-8075 cited in the application the whole document</p>	
A	<p>HWANG CAREY K ET AL: "Dynamic copy choice: Steady state between murine leukemia virus polymerase and polymerase-dependent RNase H activity determines frequency of in vivo template switching." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 98, no. 21, 9 October 2001 (2001-10-09), pages 12209-12214, XP002226739 October 9, 2001 ISSN: 0027-8424 cited in the application the whole document</p>	

-/--

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/DK 03/00490

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SVAROVSKAIA EVGUENIA S ET AL: "Structural determinants of murine leukemia virus reverse transcriptase that affect the frequency of template switching." JOURNAL OF VIROLOGY, vol. 74, no. 15, August 2000 (2000-08), pages 7171-7178, XP002226740 ISSN: 0022-538X the whole document ----	
A	WU WEIMIN ET AL: "Strand Transfer Mediated by Human Immunodeficiency Virus Reverse Transcriptase in Vitro Is Promoted by Pausing and Results in Misincorporation." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 1, 1995, pages 325-332, XP002226741 ISSN: 0021-9258 the whole document ----	
A	DESTEFANO JEFFREY J ET AL: "Determinants of the RNase H cleavage specificity of human immunodeficiency virus reverse transcriptase." NUCLEIC ACIDS RESEARCH, vol. 21, no. 18, 1993, pages 4330-4338, XP002226742 ISSN: 0305-1048 the whole document ----	
A	BRAKMANN S ET AL: "An error-prone T7 RNA polymerase mutant generated by directed evolution." CHEMBIOCHEM: A EUROPEAN JOURNAL OF CHEMICAL BIOLOGY. GERMANY 2 MAR 2001, vol. 2, no. 3, 2 March 2001 (2001-03-02), pages 212-219, XP002226743 ISSN: 1439-4227 cited in the application the whole document -----	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/DK 03/00490

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0238757	A	16-05-2002	AU 7463501 A	21-05-2002
			WO 0238757 A1	16-05-2002
			KR 2002036665 A	16-05-2002
			US 2003152943 A1	14-08-2003
WO 9842832	A	01-10-1998	US 6153410 A	28-11-2000
			AU 6772598 A	20-10-1998
			AU 724698 B2	28-09-2000
			AU 6942098 A	20-10-1998
			BR 9804791 A	17-08-1999
			CN 1230990 T	06-10-1999
			EP 0975653 A1	02-02-2000
			EP 0920496 A1	09-06-1999
			JP 2000511783 T	12-09-2000
			NZ 332906 A	28-07-2000
			PL 330287 A1	10-05-1999
			WO 9842728 A1	01-10-1998
			WO 9842832 A1	01-10-1998
			US 6177263 B1	23-01-2001
			US 6361988 B1	26-03-2002
			ZA 9803385 A	22-10-1999
WO 9801581	A	15-01-1998	US 5965408 A	12-10-1999
			AU 724521 B2	21-09-2000
			AU 3662697 A	02-02-1998
			CA 2259628 A1	15-01-1998
			EP 1007727 A1	14-06-2000
			JP 2000514651 T	07-11-2000
			US 2002142394 A1	03-10-2002
			WO 9801581 A1	15-01-1998
			US 2003194763 A1	16-10-2003
			US 2003036116 A1	20-02-2003
			US 2003113759 A1	19-06-2003
			US 6171820 B1	09-01-2001
			US 6352842 B1	05-03-2002
			US 2003175887 A1	18-09-2003
			US 6440668 B1	27-08-2002
			US 6358709 B1	19-03-2002
			US 6361974 B1	26-03-2002
			US 6489145 B1	03-12-2002